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IN THE CLAIMS:

Please amend claims 1, 3, 4, 5, 9, 11, 12, 13, 17, 19, 20, and 21, and please cancel claims 2, 10, 18, and 37-40, as set forth below.

- 1 1. (Currently Amended) A thermal management system for an integrated circuit die comprising:
 - 2 a temperature detection element formed directly on the integrated circuit die, the temperature detection element including at least one temperature sensor having an output, the at least one temperature sensor including[[:]]
a reference voltage source providing a reference voltage,
a programmable voltage source providing a programmable voltage proportional to a temperature of the integrated circuit die, and
a comparator having one input coupled via a first signal line to the reference voltage source and another input coupled via a second signal line to the programmable voltage source, the comparator to provide a signal at the output of the at least one temperature sensor in response to the programmable voltage substantially equaling the reference voltage;
 - 3 a power modulation element formed directly on the integrated circuit die, the power modulation element to reduce power consumption of the integrated circuit die in response to the output of the at least one temperature sensor;
 - 4 a control element formed directly on the integrated circuit die, the control element including at least one register to provide an enable/disable bit for the thermal management system; and
 - 5 a visibility element formed directly on the integrated circuit die, the visibility element to indicate a status of the output of the at least one temperature sensor.

2. (Canceled)